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Abstract

A method and apparatus for refreshing data in DRAM cache memory in a computer system is provided to perform data refresh operation without refresh penalty (e.g., delay in a processor) caused in a conventional data refresh system. A preferred embodiment of the present invention performs the data refresh operation with respect to a DRAM cache memory by detecting a request address made by the processor, stopping a normal refresh operation when the request address is detected, comparing the request address with TAG addresses stored in a TAG memory which are associated with data in the cache memory with higher probability of being selected by the processor, generating refresh addresses to refresh the data stored in the cache memory, each of which is generated based on age of data corresponding to the refresh address, and performing read/write operation on a wordline accessed by the request address and refreshing data on wordlines accessed by the refresh addresses, wherein the read/write operation and the refreshing data are performed simultaneously.

公告本

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(以上各欄由本局填註)

發 明 專 利 說 明 書		
一、發明名稱	中 文	在動態隨機存取記憶體快取記憶體中更新資料的方法及裝置
	英 文	METHOD AND APPARATUS FOR REFRESHING DATA IN DRAM CACHE MEMORY
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